

Making Waste Matter:

Integrated Waste Management Strategy

August 2015

A message from City of Kawartha Lakes Council

The City of Kawartha Lakes Council, as reflected in its strategy and vision, is committed to building a sustainable community, while enhancing the local natural environment for current and future residents. The effective management of the City's waste and recycling program, a core service, is central to this commitment.

The *Making Waste Matter: Integrated Waste Management Strategy* sets out a plan to address the community's long term waste management needs, enables continuous improvement in service, and sets targets for achieving a sustainable, efficient, and cost-effective waste management program.

The strategy combines the City's current successful waste management program with a new menu of carefully selected initiatives to ensure that the most applicable and beneficial services will be provided to residents and business owners within the municipality. The strategy uses a balanced framework, one that optimizes the use of important facilities, identifies crucial infrastructure investments, and reinforces community interest through new and innovative programming.

The primary goal of the *Making Waste Matter: Integrated Waste Management Strategy* is to guide the City of Kawartha Lakes towards diverting 70% of its annual generated waste away from our landfills by 2048.

The key to the success of *Making Waste Matter* will be in respecting its:

- Adaptable and accountable format – Designed to grow and change with future waste management needs and opportunities due to a built-in regular review process.
- 'Waste less living' framework – A lens through which to assess incoming initiatives, guide decision-making and generate educational materials.
- Emphasis on dialogue and partnerships – Consulting and collaborating with residents, businesses, schools, sector and industry partners, non-profit organizations, researchers and others to address gaps and challenges.
- Comprehensive and evolving promotion and education program – One that meets the needs of a diverse and expansive community.

In summary, as the City of Kawartha Lakes moves forward and adapts to a changing world, so too will its waste management program: effectively, efficiently and sustainability.

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Introduction

The *Making Waste Matter: Integrated Waste Management Strategy* outlines where Waste Management in the City of Kawartha Lakes is today and provides clear short-term (which can be implemented in the near future) and long-term (which can be implemented later in the schedule) strategies for waste management services into the future (until 2048).

The City of Kawartha Lakes with its historic towns and villages, 250 lakes and rivers, and scenic farmland and wilderness, is located within the Greater Golden Horseshoe area in the Province of Ontario. It was founded on January 1, 2001 through an amalgamation of the 17 municipalities within the former Victoria County. Namely, the Town of Lindsay, the villages of Bobcaygeon, Fenelon Falls, Omemee, Sturgeon Point and Woodville and the Townships of Bexley, Carden, Dalton, Eldon, Emily, Fenelon, Manvers, Mariposa, Ops, Somerville and Verulam and the United Townships of Laxton, Digby and Longford. The City's vast area covers 3,000 square kilometres. The City is a unique area of urban and rural populations.

The City of Kawartha Lakes is a single tier municipality dedicated to delivering sustainable waste management services including curbside collection, depot drop-off services and landfill maintenance and monitoring programs.

Current curbside collection includes blue box recycling (containers), green box recycling (papers/ cardboard), leaf & yard waste, bulky items and garbage. Depot services at the landfill facilities include: leaf & yard waste, scrap metal, electronics, household hazardous waste, blue box (containers), green box (paper/cardboard), tires and waste; while the public has numerous options for dropping off batteries, cell phones and printer cartridges at locations throughout the City.

A waste diversion rate is one of the common measures for evaluating the performance of a municipality's waste management program. It is a percentage that represents the amount of recycling and special waste that has been diverted away from the landfill over a given year. In the early 1990s, when the last comprehensive waste management study was conducted for the County of Victoria, the diversion rate was 7%. For the last six years (up until 2013), the City's diversion rate has been 39%. Though a vast improvement, the City needs to reach higher goals. Increased diversion not only provides increased revenue for the City but also extends our landfill capacity.

The goal of the *Making Waste Matter: Integrated Waste Management Strategy* is to guide the City towards an overall diversion rate of 70% by the year 2048 through the phased implementation of strategically-chosen initiatives, operational updates and educational activities.

In support of this goal, a 'waste less living' philosophy, which will focus on the 3 R's (Reduce,

Reuse, Recycle) and the addition of 'innovation', will be integrated into waste management decision-making, program delivery, education and customer service.

Importantly, the strategy is flexible and accountable. An annual report card evaluating the success of waste management initiatives and a regular *Making Waste Matter: Integrated Waste Management Strategy* review will enable adaptation to the document, as necessary.

Supporting information and additional details are provided in the *Making Waste Matter Supplementary Document*.

Waste strategy consultation

Following Council's direction, the development of the *Making Waste Matter: Integrated Waste Management Strategy* was led by the City of Kawartha Lakes' Environmental Services Department with input from City committees, Process Improvement Facilitators, residents (both permanent and seasonal), local businesses and other municipal partners. Figure 1 provides an overview of the oversight structure.

To inform participants and generate discussion during the public consultation process a 'Waste Management Report Card' was developed. This backgrounder provides a five-year review of current waste management programs, practices and trends from 2009 to 2013. (A copy of the report card is included in Part 1 of the *Making Waste Matter Supplementary Document*.)

Public engagement and feedback was generated by providing many different formats for interaction. (These are listed in Figure 2.) To ensure that the City received meaningful feedback, consultation opportunities were provided at various stages throughout the development of the strategy. This was particularly important at the beginning of the process as it ensured community priorities were at the foundation of document development.

Figure 1: Strategy oversight structure

Provide direction and approval:

- Council

Development of comprehensive strategy:

- Waste strategy taskforce
- Staff

Provide community priorities and vision:

- Public review committees
- Public workshops
- Public surveys

Figure 2: Strategy consultation opportunities

- City's website

- Social media
- Public workshops
- Online surveys
- One-on-one discussion
- Project team meetings
- Cottage associations
- Established committees
- Municipal partners
- Messaging through local media
- Business directory
- Multi-residential owners
- Outreach at landfill sites
- Community events
- Engaging community leaders
- Taskforce discussions

Through the *Making Waste Matter* public consultation process, the City of Kawartha Lakes community expressed an interest in working towards the identification of both short- and long-term strategies to enable a flexibility needed to meet both current and future waste management needs.

The common themes expressed during public consultation included the need to:

- Find innovative ways to reduce waste at the source
- Increase public participation through the use of engaging, recognizable and targeted education and promotion strategies
- Work with industry to find sustainable waste management solutions

The responsibility of community members was identified as:

- Actively participating in existing and new waste management initiatives
- Contributing to increasing the City's diversion of waste materials from our landfills
- Incorporating a 'waste less living' philosophy into daily choices and activities by first understanding their role in improving the management of City of Kawartha Lakes' waste

These concepts will be explored throughout this document.

Waste management policy

Waste management is controlled at all levels of government but it is primarily regulated at the provincial level. In Ontario, it is governed by three acts: the Environmental Protection Act (EPA), the Environmental Assessment Act (EAA) and the Waste Diversion Act (WDA). These acts, with their associated regulations, establish and detail the authority and responsibility of the Ministry of the Environment and Climate Change (MOECC) and the legal requirements of the City of Kawartha Lakes.

Other policies, or potentially forthcoming policies, that influence City of Kawartha Lakes waste management services include: provincial stewardship programs, Individual Producer Responsibility, City of Kawartha Lakes By-law 2007-024 and the Green Energy Act.

Environmental Protection Act (EPA)

The role of the EPA is to protect the natural environment including air, land and water. Within this act there are a number of regulations specific to how waste is managed in Ontario.

Several key regulations that apply to the City's waste management operations are:

- Ontario Regulation (O. Reg.) 101/94 Recycling and composting of municipal waste
- O. Reg. 102/94: Waste audits and waste reduction work plans
- O. Reg. 232/98: Landfilling sites
- O. Reg. 347: General waste management
- O. Reg. 359/09: Renewable energy approval

Environmental Assessment Act (EAA)

The Environmental Assessment Act sets out a process to evaluate proposed waste management activities such as landfilling and its potential effect on the environment.

The key regulation that applies to the City's waste management operations is:

- O. Reg. 101/07: Waste management project

This refers to certain projects or works that would require EAA approval. An example of which is the site selection for the establishment of a new landfill.

Waste Diversion Act (WDA)

The intent of the WDA is to promote the reduction, reuse and recycling of waste and to facilitate the development, implementation and operation of waste diversion programs. Under this act, Waste Diversion Ontario (WDO) was established. The WDO is primarily responsible for the achieving the purpose of the Act.

Key regulations under this act that apply to the City's waste management operations include:

- O. Reg. 273/02: Blue box waste
- O. Reg. 393/04: Waste electrical and electronic equipment
- O. Reg. 542/06: Municipal hazardous or special waste
- O. Reg. 84/03: Used tires

Provincial stewardship programs

In Ontario, waste diversion programs, which are required in accordance with the WDA, include: the Blue Box Program, the Municipal Hazardous or Special Waste Program (Orange Drop), the Waste Electrical and Electronic Equipment Program and the Ontario Tire Stewardship Program.

Individual Producer Responsibility

Individual Producer Responsibility (IPR) is an environmental policy approach in which producers bear the responsibility of ensuring their products and packaging are properly managed at the end of their life-cycle.

The basic goal of IPR is to achieve waste reduction and environmental protection in the most efficient manner; producers are best positioned to reduce waste associated with their products and have the operational structures in place to do this economically.

This potential provincial legislation would increase waste diversion in the Province of Ontario. Legislation to make this fundamental change to Ontario's waste management structure was drafted as the Waste Reduction Act (Bill 91). Due to the the provincial election in 2014, this legislation did not proceed. It is anticipated, that new legislation will be introduced in 2015/2016.

CKL Waste Management By-Law 2007-024

Waste Management By-Law 2007-024 sets out specific guidelines for waste disposal and diversion programs for the City of Kawartha Lakes. This by-law includes details on designated materials for recycling, curbside container requirements, current disposal fees, landfill hours of

operation and prohibited wastes.

With the implementation of the initiatives outlined in the *Making Waste Matter: Integrated Waste Management Strategy*, the current waste management by-law will need to be reviewed and amended, as appropriate.

Green Energy Act

The Green Energy Act requires municipalities to: report on greenhouse gas (GHG) emissions, to foster the growth of renewable energy and to seek cleaner sources of energy within the Province of Ontario.

The City of Kawartha Lakes is committed to incorporating renewable energy projects into its operations as we move towards building a more sustainable community.

Looking at today

In the City of Kawartha Lakes, waste management services are coordinated by one central department for the entire municipality. Our services include: overseeing curbside collection, managing public depots and drop-offs, providing landfill maintenance & monitoring services and delivering education to the public to encourage the diversion of waste away from landfills. (These are summarized in Figure 3.)

Figure 3: Current waste management services

| Recycle and reuse programs | Collection systems | Promotion and education | Disposal facilities |
|----------------------------|--|--|----------------------------------|
| Electronics | 2 bag weekly waste limit | “Be Waste Wise” brand | 5 open landfill sites |
| Tires | Unlimited residential weekly recycling | School programs | 11 closed landfill sites |
| Scrap metal | Public space recycling | Social media | 3 leachate collection systems |
| Boat and bale wrap | Large item and Freon collection | MyWaste app | 1 landfill gas collection system |
| Reuse Centre (Fenelon) | Event days | Various methods of advertising and education | 1 electrical generation system |
| Household hazardous waste | | | |
| Leaf and yard | | | |

Waste management facilities (open landfill sites)

Five open landfill sites receive the waste that is generated within the City of Kawartha Lakes. These landfill sites are: Lindsay Ops, Fenelon, Eldon, Somerville and Laxton. Each landfill site operates under approval by the Ministry of the Environment and Climate Change (MOECC). The capacity requirements and forecasted closure dates are summarized in Table 1. (Additional information for the City’s open landfill sites is provided in the *Making Waste Matter Supplementary Document*, Part 3.)

Table 1: Summary of open landfill sites

| Landfill site | Forecasted closure date |
|---------------|------------------------------------|
| Lindsay Ops | 2037 |
| Fenelon | 2016 (2024 pending MOECC approval) |
| Somerville | 2084 |
| Eldon | 2017 (2032 pending MOECC approval) |
| Laxton | 2024 |

Diversion programs

Diversion programs are a fundamental component of the City’s waste management services. Diversion redirects recyclable and special waste materials away from the landfill. This is critical as landfill space is limited and requires extensive resources to manage. Figure 4 shows the chronological implementation order of the various diversion programs the City has in place.

To identify the trends and participation rates of these programs, the City tracks the amount of waste and recycling managed and conducts regular audits. The latest data (2013/ 2014), was used as baseline information to develop this strategy and is included in the *Making Waste Matter Supplementary Document (Part 4)*.

Figure 4: History of waste management diversion initiatives

2001:

- City-wide curbside collection
- Scrap metal
- Tires
- Reuse centre
- Household hazardous waste

2002:

- Textile collection

2005:

- Curbside leaf and yard

2007:

- Boat and bale wrap

2009:

- Electronics recycling

2010:

- Public space recycling

2011:

- Roundup days

2012:

- Landfill gas flare

2014:

- New blue box materials

2015:

- Paint reuse

* This program was canceled in 2014 due to decreased participation and increased local reuse opportunities.

Preparing for tomorrow

Changing demographics and population growth of the City of Kawartha Lakes will have an impact on what type of waste is generated and how much. To project waste generation rates, information from the City's Growth Management Strategy, found on the City's website, was included in the Making Waste Matter: Integrated Waste Management Strategy.

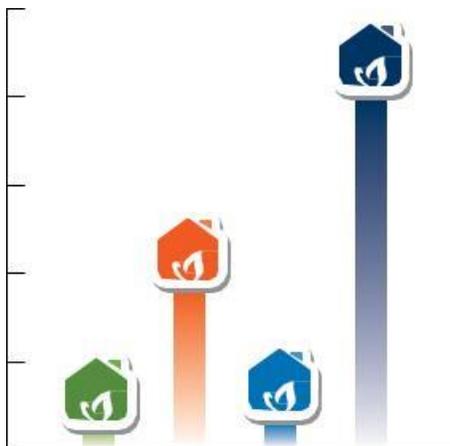
It is important to note that the City's growth plan includes forecasting to 2032; however, Making Waste Matter goes beyond to 2048, corresponding to the full build out of Lindsay. The forecasted shifts with the greatest potential impact on City waste management services are:

- A population increasing to 100,000 by 2032 (and beyond to 2048)
- The number of households/ dwellings increasing to 42,516 by 2032 (and beyond to 2048)
- Additional focused growth in Lindsay, Bobcaygeon, Fenelon Falls and Omemee
- The conversion of seasonal residences to permanent residences and
- An increase in the number of multi-residential households

(Figure 5 illustrates the projected growth for the City of Kawartha Lakes by residential dwelling type.)

In summary, the City will need to accommodate anticipated demographic growth by increasing and improving waste management services and focusing those services on changing community needs.

Figure 5: Projected CKL growth



To better understand how these growth changes will impact waste management services,

projected waste generation rates are illustrated in Figure 6. The waste generation rates are based on maintaining the current diversion rate of 2013 (for both residential, and Industrial, Institutional and Commercial) throughout the Integrated Waste Management Strategy period (2016- 2048). According to the City’s Growth Management Strategy, an approximate 1.2% annual growth rate is expected.

If waste diversion programming for the City of Kawartha Lakes remains status quo, it is estimated that the municipality will be generating 56,000 tonnes of waste per year by 2048.

The City of Kawartha Lakes’ Growth Management Strategy offers projections until 2031. As growth projections are updated beyond 2031 to 2048 changes in growth and type of waste generated will be considered in the City’s waste management program decisions.

When preparing for the future, it is important to consider where the community will continue to dispose of waste. Each of the five (5) open landfill sites operates under current approved capacity with forecasted closure dates. In anticipation of future disposal needs, a review of landfill expansion opportunities and required timelines for approval was conducted. This is summarized in Table 2.

Figure 6: Projected future waste generation rates (2048)

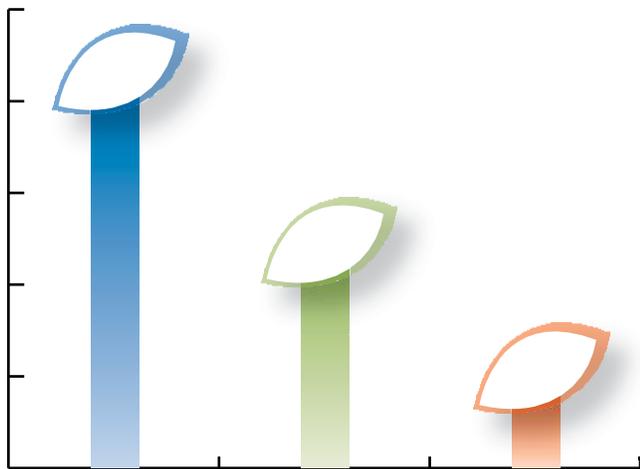


Table 2: Future landfill availability

| Landfill site | Forecasted closure date | Expansion available | Approval timelines |
|---------------|-------------------------|---------------------|--------------------|
|---------------|-------------------------|---------------------|--------------------|

| Landfill site | Forecasted closure date | Expansion available | Approval timelines |
|----------------------|--------------------------------|----------------------------|---------------------------|
| Lindsay Ops | 2037 | Yes | 3.5 years |
| Fenelon | 2016 (2024 pending approval) | No | N/A |
| Somerville | 2084 | Sufficient capacity | N/A |
| Eldon | 2017 (2032 pending approval) | No | N/A |
| Laxton | 2024 | No | N/A |

To meet future waste management needs that address both our growing Kawartha Lakes demographics and our limited landfill capacity, the goal of increasing the City of Kawartha Lakes waste diversion rate to 70% from 39% by 2048 was set.

Meeting our future needs

Central to the *Integrated Waste Management Strategy* was the public consultation process. This extensive and multi-layered activity generated 70 potential program strategies, opportunities and operational adjustments. A comprehensive ranking exercise was then conducted using key criteria to create a 'short list' of potential waste program initiatives for the City. These were evaluated further for consideration in the strategy. (See Part 7 of the *Making Waste Matter Supplementary Document*.)

Fundamental considerations in the evaluation of the proposed waste management activities:

- In line with the Strategy's goals
- Ensuring compliance with current legislation and policies
- Acknowledging the life cycle of the City's open landfill sites
- Is cost-efficient

The proposed waste management initiatives were further evaluated using the following criteria:

- Flexibility of programming (e.g. easy to implement and adapt)
- Successful examples of similar municipal programs
- Impact on the strategy's diversion goal
- Implementation and scheduling requirements
- Financial implications to the City
- Regulatory requirements

External partnerships were also identified, including:

- Working with neighbouring municipalities on program implementation, contracts and joint education efforts
- Participating in multi-stakeholder working groups to cultivate partnerships and support networks (including those from farther-reaching municipalities)
- Becoming members of private sector boards or committees that develop packaging standards for Ontario

Promotion and education

Providing public education to support the City's waste management programming is essential to achieving the goals set out in the *Making Waste Matter: Integrated Waste Management Strategy*.

Delivering waste and recycling communication using a wide variety of educational tools and activities ensures that the requirements, expectations, and philosophy ('waste less living') behind waste management initiatives reach our diverse community; they must be accessible, consistent and effectively reach all demographic groups and locations across the City.

Public education strategies that will be used to deliver Making Waste Matter initiatives to the City of Kawartha Lakes community include:

- Employing recognizable and uniform branding
 - Corporate (City of Kawartha Lakes)
 - 'Be Waste Wise' (Waste Management Services)
- Maintaining and enhancing appropriate digital media resources
 - City of Kawartha Lakes website
 - Online searchable database for recyclable and waste materials
 - Downloadable apps (ex. My-Waste App)
 - Community events listings
 - Blog contributions
 - "How-to" and "Did you know?" videos
- Building support and leveraging digital media promotion through the use of relevant social media outlets
 - Facebook
 - Twitter and others, as appropriate
- Engaging local print, electronic & broadcast news outlets
 - News releases

- Editorials
- Advertising locally
 - Newspapers
 - Community guides (ex. Parks and Recreation)
 - Road signs
 - Tax bill inserts
 - Radio
- Developing and delivering targeted educational materials
 - Annual recycling and waste calendar
 - Educational “prompts” (ex. refrigerator magnets reminding residents of the appropriate recycling box materials)
 - Incentive prizes that demonstrate the use of recyclable materials (ex. pen made of water bottles)
- Partnering with CKL departments and Others
 - Working with Municipal Service Centres to ensure appropriate messaging reaches community members
 - Setting up displays and delivering workshops at local libraries
 - Working with landfill attendants to support their role as “community recycling and waste educators”
 - Working with economic development to provide displays and educational materials at relevant community events
- Providing opportunities for youth engagement
 - School presentations and projects
 - Partnership programs
 - Student placement opportunities (secondary and post-secondary)
 - Short-term projects for students (ex. waste auditing, etc.)

- Facility tours
- Partnerships with other municipalities
- Cultivating community support and maintaining an understanding of community need through public interaction
 - Round-Up Days (community drop-off events for recycling and special waste materials)
 - Earth Week events and activities (April)
 - Waste Reduction Week events and activities (October)
 - Community clean-ups
 - Workshops, event displays, tours and demonstrations

Reduce

During the *Making Waste Matter* public consultation process, participants expressed a strong support for waste reduction. Waste reduction in the City of Kawartha Lakes can provide environmental benefits including preserving existing landfill capacity and reducing greenhouse gas (GHG) emissions. This emphasis can also result in future cost avoidance for the City, while decreasing personal disposal expenses for community members.

The *Making Waste Matter* reduce goal will be to decrease the amount of waste discarded at City of Kawartha Lakes landfill sites by 21% through the implementation of 'reduce' initiatives. If successful, this will be a significant contributor towards achieving our overall goal of diverting 70% away from the landfill.

The following summarizes a series of favoured waste reduction initiatives as vetted through the *Making Waste Matter* consultation and evaluation process. These short-term and long-term activities provide the greatest positive impact to the current waste management program. Additional details on these strategies are provided in the Making Waste Matter Supplementary Document (Part 7).

Of special note: Any specific regulatory approvals required and detailed financial justification for specific programs will be scrutinized internally and detailed in a staff report to Council prior to implementation.

Short-term strategies (2016-2018)

Clear bag waste collection

Launch 2016

The requirement that waste be set out for collection in clear plastic bags has been very successful in other jurisdictions. Due to the visibility of the contents, clear bags discourage the placement of recyclables in the waste stream. During collection, a sticker is placed on non-compliant bags to inform the resident of their error and encourage diversion. The use of an opaque 'privacy bag' within the clear plastic bag is permitted.

Cost: \$4,000 (initial education campaign)

Benefits: saves 2-3 years of landfill capacity; additional funding from WDO

Revenue: 5% increase in marketed recyclables

Impact on Diversion: 5%-10% increase

Alternative daily cover for Fenelon and Somerville landfill sites

Launch 2016 and 2017

It is necessary to cover landfill at the end of a disposal day to reduce odours, blow-away materials and visiting vermin. Sand is regularly used to cover waste at the Fenelon and Somerville landfill sites; however, it is expensive and takes up limited landfill space.

The use of removable steel plates, instead of sand, at the Fenelon and Somerville landfill sites will be an operational improvement that will gain 1.5 years of landfill capacity.

Cost: \$100,000

Benefits: 43% reduction in purchase of sand; long-term savings of \$50,000/year

Tipping fee increase

Launch 2017

Waste is expensive to manage as it is highly regulated. City of Kawartha Lakes landfill tipping fees have not kept pace with increases in other municipalities. The tipping fees of neighbouring municipalities are an average of \$126/tonne while the City currently charges \$95/ tonne. Therefore, an annual incremental increase of \$5 per year over 5 years will ensure City fees come into line with similar municipalities while providing revenue to sustain and improve waste management services.

In the future, consideration will be given to charging special fees for specific materials; while fees will be dropped for those materials that become recyclable.

Cost: \$0

Revenue: \$118,000.00 for every \$5/ tonne/year increase

Backyard digester/composter program

Launch 2017

Studies show that a single household can divert up to 30% of its generated waste through backyard composting. By increasing the promotion and support for backyard composting, the City can help residents keep this unnecessary material away from the landfill, while enabling them to generate a high-quality fertilizer for their lawns and gardens. The City will also promote the use of backyard digesters; in addition to regular organic material, digesters compost meat and oily products.

Cost: revenue neutral

Impact on Diversion: 1% increase

Note: The City will continue to investigate cost-effective options for managing Source Separated Organics (SSO) during the regularly scheduled Strategy reviews.

Lowering of the curbside waste bag limit

Launch 2018/ 2019

Currently, the weekly residential limit for waste set out at the curb is 2 bags. This would be reduced to 1 bag per week to encourage recycling and other forms of diversion. Business waste limits would change from 4 containers per week to 2 containers per week. Additional waste bag tags could be purchased, if required (\$3/bag).

Cost: \$4,000 (initial education campaign)

Savings: \$30,500 to \$61,000/year (reduced collection costs)

Revenue: purchase of bag tags

Impact on Diversion: 5%- 10% increase

Bi-weekly curbside waste collection

Launch 2018/2019

In combination with the curbside waste bag limit reduction, residential households will see their curbside waste collection change from weekly to bi-weekly (maintaining the new 1 bag/ week limit). Business curbside waste will change from 2 containers per week to 4 containers bi-weekly.

Cost: \$4,000 (initial education campaign)

Savings: \$735,000 (reduced collection costs)

Revenue: purchase of bag tags

Impact on Diversion: 10%- 20% increase

Long-term strategies (beyond 2019)

Centralized landfill facilities

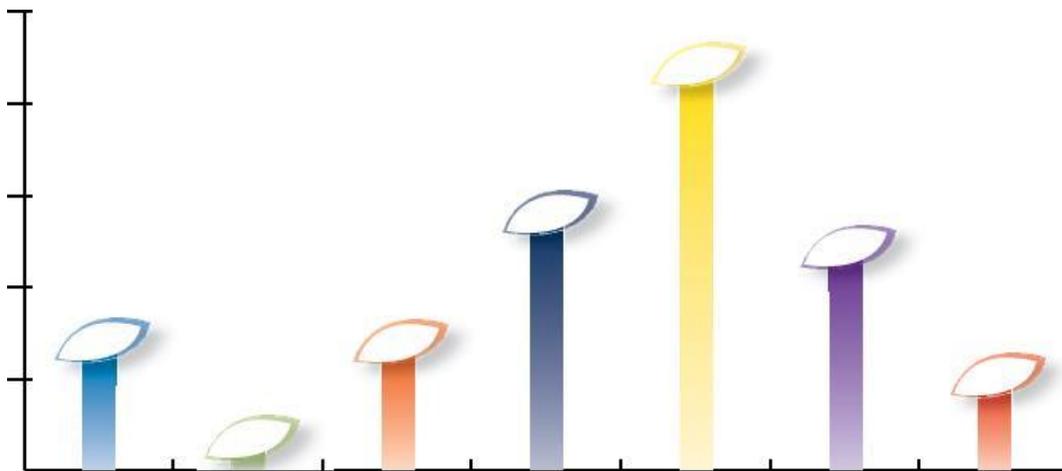
With a number of the City’s open landfill sites reaching the end of their disposal capacity, there is an opportunity to centralize landfill operations to two locations: the Somerville landfill will service the northern community, and; the Lindsay Ops landfill will service the central and southern portions of the municipality. Centralizing landfill operations in rural and urban areas will involve supporting EA studies as required.

Savings: over \$100,000/year (saving in equipment and labour by operating 2 landfill sites instead of 5)

Alternative daily cover at landfills (Eldon)

Impact on Diversion: none The use of removable steel plates at the Eldon landfill will be an operational improvement that will gain 3 to 6 months of landfill capacity at this site over 15 years as it reduces the amount of sand used as daily cover.

Figure 7: Projected future waste generation rates with the implementation of “reduce” strategies



By implementing the proposed reduction initiatives, the amount of waste generated by the City of Kawartha Lakes will be reduced from 39,585 tonnes/year (2013) to 28,000 tonnes/year by 2048.

Reuse

Every day, usable items are discarded as garbage and disposed of at City landfills. Part of building a 'waste less living' philosophy within the community will be to change the perception of these items from

waste to valuable material. Supporting existing reuse opportunities within the community and expanding the City's reuse initiatives will support a City of Kawartha Lakes 'waste less living' philosophy. Reuse will allow residents and businesses to utilize existing resources within the community (e.g. buildings, tools, machinery, labour, etc.) to encourage repair and repurposing of materials previously sent to the landfill.

The *Making Waste Matter* reuse goal will be to decrease the amount of waste discarded at City of Kawartha Lakes landfill sites by 2% through the implementation of 'reuse' initiatives.

The following summarizes the short- and long-term 'reuse' initiatives identified during the Making Waste Matter consultation and evaluation process. These strategies will provide the greatest positive impact to the City of Kawartha Lakes' waste management program. (Details on these strategies are provided in the Making Waste Matter Supplementary Document, Part 7).

Of special note: Any specific regulatory approvals required and detailed financial justification for specific programs will be scrutinized internally and detailed in a staff report to council prior to implementation.

Short-term initiatives (2016-2018)

Local business partnerships

Launch 2016

The City will prioritize building relationships with current and future businesses, not-for-profit organizations and other groups in the community that, in partnership with the City, have the potential to provide reuse options.

Long-term initiatives (beyond 2019)

Searchable online waste materials database

A user-friendly, searchable, online database will enable community members

to search for materials they wish to discard, identify if it is recyclable or not and then receive instructions on proper disposal, including reuse options. The database will be installed in the waste

management section of the City of Kawartha Lakes' website.

Impact on Diversion: 1% Increase

Landfill construction reuse program

Construction waste is currently taken at all City landfill sites for disposal.

Much of this material could be separated and reused. The City will establish and operate a construction waste station at one or more of the landfill sites to collect, sort and sell construction materials back to the general public, contractors, charities and other interested parties.

Impact on Diversion: 1% Increase

Figure 8: Projected future waste generation rates with the implementation of "reuse" strategies



By implementing the proposed reuse initiatives, the amount of waste generated by the City of Kawartha Lakes will be 39,000 tonnes/year by 2048.

Recycle

The *Making Waste Matter* recycle goal will be to decrease the amount of waste discarded at City of Kawartha Lakes landfill sites by 15% through the implementation of 'recycling' initiatives. This contributes notably to the overall objective of reaching 70% diversion.

As initiatives are implemented to increase the amount of blue and green box recycling material diverted, consideration will need to be given to the capacity and operations of the current transfer station building being utilized at the Lindsay Ops landfill site. Regular monitoring of the quantity of materials managed at this facility will provide updated information to evaluate future operational needs.

The following summarizes the short- and long-term waste reduction initiatives that provide the greatest positive impact to the current waste management system. (Additional details for program opportunities are provided in the *Making Waste Matter Supplementary Document*, Part 7.)

Of special note: Any specific regulatory approvals required and detailed financial justification for specific programs will be scrutinized internally and detailed in a staff report to council prior to implementation.

Short-term initiatives (2016-2018)

Construction waste recycle program

Launch 2018

In this initiative, construction and demolition materials (ex. lumber, shingles, etc.) would be separated into designated bins at the City's landfill sites for recycling. These materials would be managed by a third party for recycling at an external facility. Tipping fees for specific construction and demolition items would be less than regular tipping fees in order to promote the recycling of these items.

Cost: \$10,000 (initial education campaign and staff time)

Revenue: after start-up, the program is revenue neutral

Impact of Diversion: 10%- 15% increase

Long-term initiatives (beyond 2019)

Weekly blue/green box collection

This strategy would see a change to curbside recycling collection for both residents and businesses. With it, the frequency of curbside pick-up would change from the current weekly alternating blue box and green box collection to collecting both blue and green box recycling each week. Materials would continue to be separated like the current program: containers into the blue box and papers into the green box.

Impact on Diversion: 2% increase

Mattress recycling program

Mattresses are difficult to landfill due to their flexible, spring-like character. For this initiative, mattress recycling stations would be set up at each of the landfill sites. The collected mattresses would then be managed by a third party for recycling at an external facility.

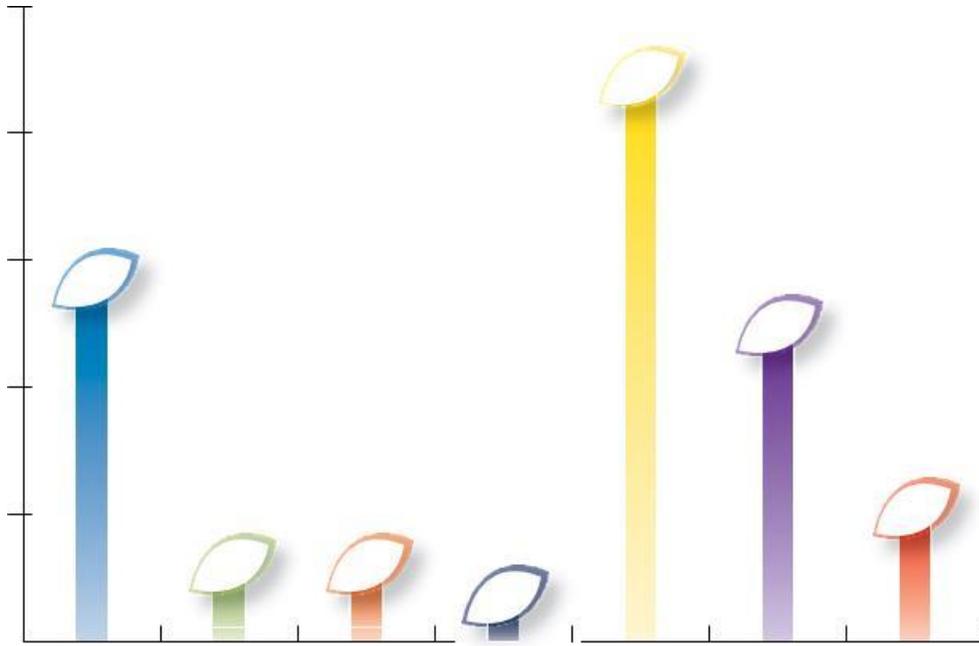
Impact on Diversion: 2% increase

Increased commercial curbside recycling cap

Currently at the curb, businesses have a weekly recycling set out limit of 4 roll-out carts. Once they reach this cap, business owners must pay to recycle as a cost of doing business. To increase diversion, the City will review this commercial limit and set one that is higher yet manageable and cost-effective.

Impact on Diversion: 1% increase

Figure 9: Projected future waste generation rates with the implementation of “recycle” strategies (2048)



By implementing just the proposed recycle initiatives, the amount of waste generated by the City of Kawartha Lakes will be 32,000 tonnes/year by 2048.

Innovate

Waste management is a sector with continual operational changes and opportunities as well as emerging technologies that may create efficiencies within current waste operations. The City is dedicated to exploring alternative technologies and ways of doing business to increase diversion and preserve landfill capacity. During the initial public consultation, there were several ideas that were heard including focusing on reduction of greenhouse gas emissions and engagement in product design.

The *Making Waste Matter* innovation goal will be the reduction of the Waste Management 'Diversion's' greenhouse gas emissions by 5,000 tonnes (CO2 equivalent).

The following summarizes the short- and long-term innovation initiatives that provide the greatest positive impact to the current waste management system and reduction of greenhouse gas emissions. (Additional details for program opportunities are provided in the *Making Waste Matter Supplementary Document*, Part 7.)

Of special note: Any specific regulatory approvals required and detailed financial justification for specific programs will be scrutinized internally and detailed in a staff report to council prior to implementation.

Short-term initiatives (2016-2018)

Alternative fuel collection vehicles

Launch 2018/ 2019

Waste Management Services will investigate the potential of requiring contractors to use alternative fuel-burning vehicles for curbside collection. Alternative fuels could include: compressed natural gas (CNG), liquefied natural gas (LNG) or another substitute to diesel.

This initiative will assist the City in reducing its greenhouse gas emissions.

Savings: potential fuel savings in collection contract (details unknown at this time)

GHG Reduction: 5,000 tonnes CO2 equivalent

Long-term initiatives (beyond 2019)

Packaging redesign committees

Individual Producer Responsibility (IPR) is an environmental policy approach wherein producers

bear responsibility for ensuring their products and packaging are properly managed at the end of the product life-cycle. As the Province of Ontario moves towards implementing this system, there will be opportunities for municipalities and industry to work together towards common diversion goals.

The City will commit to being involved in future IRP opportunities and/or working groups, that assist with the diversion of materials from our landfills.

Impact to Diversion: packaging reduction (undefinable at this time)

Measuring and reporting on strategy successes

An annual update on the implemented waste management initiatives is integral to the effective delivery and overall success of the *Making Waste Matter: Integrated Waste Management Strategy*. Presented as an annual scorecard, the assessment will be based on the key criteria used to evaluate the strategies initially.

Through this regular monitoring of the City's waste management program, additional opportunities for improvement will be identified and will enable the *Integrated Waste Management Strategy* to continually evolve into the future.

The following performance criteria that will be reported in the annual scorecard:

Current waste management initiatives

- Diversion rate (residential)
- Waste disposed (tonnes)
- Generation rates per capita
- Remaining landfill capacity
- Timing of approvals
- Program cost/revenue/savings
- Funding opportunities
- Reduced greenhouse gas emissions (measured in CO₂ equivalent)
- Community outreach initiatives (number of articles, forums, presentations, etc.)
- Community partnerships established

Strategy updates and revisions

The timeline in which to implement the *Making Waste Matter: Integrated Waste Management Strategy* extends over a 32 year period (until 2048).

As it is expected there will be significant change in waste management practices and quantities generated over the next 32 years, it will be critical to regularly review, update and augment this document so that it continues to serve as a relevant guide.

With this in mind, any future waste management opportunity that meets the evaluation criteria and can help meet the City of Kawartha Lakes waste management goal of 70% diversion from landfill will be considered during the review process.

By conducting *Making Waste Matter* updates, the City's waste management program will be able to adapt to technological advances, changes in the marketplace and amended regulatory requirements. It will regularly detail new initiatives and community partnerships, and provide updates on growth & population projections. As indicated, any specific regulatory approvals required and detailed financial justification for specific programs will be scrutinized internally and detailed in a staff report to council prior to implementation.

Another important consideration will be future landfill utilization opportunities. The forecasted closure date for each open landfill site is based on annual waste generation rates. As waste management initiatives are implemented, they will have a positive impact on the available capacity of each landfill, extending site life. The City of Kawartha Lakes will regularly monitor the disposal capacity of each facility and identify Ministry of the Environment and Climate Change approval timelines for future expansion opportunities.

Long-term benefits of the strategy

The initiatives of *Making Waste Matter: Integrated Waste Management Strategy* delivered via a 'waste less living' framework will achieve the goal of 70% residential waste diversion from City of Kawartha Lakes' landfill sites. The projected impact will assist the municipality to achieve its goal and reach a projected 70% residential diversion rate.

Reduce

The proposed short- and long-term 'reduce' initiatives could produce the following benefits:

- Impact on Diversion: 21% increase
- Landfill Capacity: will gain an additional 3.5 years of disposal

Reuse

The proposed short- and long-term 'reuse' initiatives could produce the following benefits:

- Impact on Diversion: 2% increase
- Landfill Capacity: gain is minimal

Recycle

The proposed short- and long-term 'recycle' initiatives can produce the following benefits:

- Impact on Diversion: 15% increase
- Landfill Capacity: will gain an additional 5 years of disposal

Innovate

The proposed short- and long-term 'innovate' initiatives can produce the following benefits:

- GHG Emissions Reduction: 5,000 tonnes (CO2 equivalent)
- Landfill Capacity: no gain

Figure 10: Diversion quantities identified for each recommended initiative



By implementing all proposed initiatives (thus achieving the Strategy's goal of 70% diversion from landfill), the City of Kawartha Lakes will reduce waste disposal from 39,585, tonnes in 2013 to an estimated 19,000 tonnes per year by 2048.